

### Notice of Allowability

Application No.

10/084,287

Examiner

Susan W Berman

Applicant(s)

XU ET AL.,

Art Unit

1711

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment received 08-05-2003.
2. ☒ The allowed claim(s) is/are 21-38.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
(a) ☐ The translation of the foreign language provisional application has been received.
6. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.  
(a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.  
(b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.  
(c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- 1 ☐ Notice of References Cited (PTO-892)  
3 ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
5 ☒ Information Disclosure Statements (PTO-1449), Paper No. 8/03  
7 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 2 ☐ Notice of Informal Patent Application (PTO-152)  
4 ☐ Interview Summary (PTO-413), Paper No. \_\_\_\_\_.  
6 ☒ Examiner's Amendment/Comment  
8 ☒ Examiner's Statement of Reasons for Allowance  
9 ☐ Other

*Susan Berman*

A.U. 1711

*Primary Examiner*

*EXAMINER'S AMENDMENT*

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tracy Bornman on October 17, 2003.

The application has been amended as follows:

Claim 21, line 11, after "R<sub>1</sub> is" delete "a compound"; and in the third line from the bottom, after "R<sub>1</sub> being" delete "one of said compounds" .

Claim 22, line 8, after "R<sub>1</sub> is" delete "a compound"; and in the last line, after "R<sub>1</sub> " delete "compounds" .

Claim 29, last line, delete "photoinitiating" and insert therefor --solubility-improving-- .

*REASONS FOR ALLOWANCE*

The following is an examiner's statement of reasons for allowance:

The prior art cited below and otherwise known to the Examiner teaches copolymers of styrene/maleic anhydride containing unsaturated polymerizable groups or groups derived from aminophenols or aminobenzoic acid. Copolymers having pendant photoinitiating groups are also known in the art. However, there is no disclosure of or suggestion in the prior art to provide a styrene/maleic anhydride copolymer wherein the maleic anhydride monomer unit contains pendant groups corresponding to R<sub>1</sub> in the instant claims, wherein the groups R<sub>1</sub> must include at least one -NH bonded to one of the carbon atoms labeled with a (1) or a (2). The instantly claimed combination of substrate and image layer are considered to be distinguished from the known compositions of the same polymer in a black matrix referred to in the Declaration of Jonathan Mayo received 08-05-2003 by the recitation in the last three

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lines of claim 1 setting forth the light transmittance of the image layer on the substrate. See Applicant's remarks submitted 08-005-2003 for a more detailed discussion.

The closest prior art known to the examiner is cited below:

Wakata et al (5,514,502) disclose photopolymerizable compositions for color filters comprising a copolymer of styrene/maleic anhydride reacted with a primary amine. The primary amines disclosed contain aryl groups, however, no groups of the formulae set forth in claim 1 are taught. See the Abstract and column 3. Katoh et al (5,362,603) disclose photopolymerizable compositions for color filters comprising a styrene/maleic anhydride copolymer wherein the maleic acid anhydride unit is reacted to provide an ethylenically unsaturated polymerizable group. See column 6. The disclosures of Kobayashi et al (5,827,626) and Satoh et al (5,821,016) are cumulative of Katoh et al. Tsujimoto et al (4,740,561) teach a process for preparation of N-(hydroxyphenyl)maleimide copolymers.

Rehmer et al (5,389,699) disclose (meth)acrylate copolymers containing copolymerized acrylate monomers containing an acetophenone or benzophenone initiating group of formula I. Rogers (3,591,661) discloses copolymeric photosensitizers prepared by copolymerizing an acrylate monomer having an anthraquinone group. Kohler et al (5,532,112) disclose coreactive photoinitiators for systems comprising ethylenically unsaturated monomers. The reactive groups in the coreactive photoinitiators can be amino, hydroxyl, epoxy, isocyanate or ethylenically unsaturated groups. However, there is no suggestion to react the disclosed photoinitiators having a reactive group with the maleic anhydride monomer unit in a copolymer with styrene.

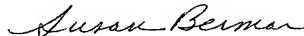
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman  
Primary Examiner  
Art Unit 1711

SB  
October 17, 2003